

## Session No. 7

---

**Course Title: Social Dimensions of Disaster, 2<sup>nd</sup> edition**

### **Session 7: Disaster Mythology**

**1 hr.**

---

#### **Objectives:**

- 7.1 Explain the concept of “disaster mythology”
- 7.2 Describe six myths about human responses to disaster and relevant empirical research findings that have proven them to be incorrect
- 7.3 Describe three implications of the “disaster mythology” for emergency managers.

#### **Scope:**

Introduction to the public myths about disaster behavior and related research that has debunked them; relevance of disaster myths for emergency managers.

---

#### **Readings:**

##### *Student Reading:*

Fischer, Henry W., III. 1998. *Response to Disaster: Fact versus Fiction and It's Perpetuation*. Lanham, Maryland: University Press of America, Inc. (Chapter 2 only; “The Behavioral Response to Disaster”; only first section of this chapter entitled, “The Public Perception of How People Behave In a Disaster: The Disaster Mythology,” pp. 13-22.

##### *Professor Readings:*

Quarantelli, E.L. and Russell R. Dynes. 1972. “When Disaster Strikes (It Isn’t Much Like What You’ve Heard and Read About).” *Psychology Today* 5:66-70.

Dynes, Russell, E.L. Quarantelli and Gary A. Kreps. 1972. *A Perspective on Disaster Planning*. Columbus, Ohio: Disaster Research Center, Ohio State University (Chapter 3 only: “Images of Disaster Behavior,” pp. 15-37). In 1985 the Disaster Research Center was relocated to the University of Delaware, Newark, Delaware, 19716. Home page address: <http://www.udel.edu/DRC/homepage.htm>.

### *Background References:*

Wenger, Dennis E., Thomas F. James, and Charles E. Faupel. 1980. *Disaster Beliefs and Emergency Planning*. Newark, Delaware: Disaster Research Project, University of Delaware.

Wenger, Dennis E., James D. Dykes, Thomas D. Sebok, and Joan L. Neff. 1975. "It's a Matter of Myths: An Empirical Examination of Individual Insight into Disaster Response." *Mass Emergencies* 1:33-46.

Quarantelli, E.L. 1960. "Images of Withdrawal Behavior in Disasters: Some Basic Misconceptions." *Social Problems* 8:68-79.

---

### **General Requirements:**

Student Handouts (7-1 and 7-2 appended). Note: it is recommended that the professor prepare Handout 7-2 using results obtained from the "Pre-test" given during Session No. 1.

Overheads (7-1 through 7-8).

See individual requirements for each objective.

---

### **Objective 7.1 Explain the concept of "disaster mythology."**

#### **Requirements:**

Student Handout 7-1; "Opinion Survey".

Student Handout 7-2; "Opinion Survey: Sample Class Results."

#### **Remarks:**

I. Introduction.

A. **Distribute and administer** the "Opinion Survey", i.e., Student Handout 7-1.

1. **Explain:** "This is **not** a test for a class grade."
2. **Emphasize:** "You may recall the first day of class when everyone filled out this 'Opinion Survey'. Now I want you to identify the **best answer** based on the **assigned reading** you completed prior to this

class meeting, that is, the portion of the book chapter written by Professor Fischer.” (Fischer, 1998, pp. 13-22).

## B. Exercise.

1. **Explain** that student responses will be discussed in an exercise.
2. **Distribute** Student Handout 7-2; “Opinion Survey” Sample Results.”
3. **Analysis:** “Compare your answers to the class results listed on the Handout” (i.e., 7-2). Look for places where your **new answers differed** from those most commonly given by this class during our first meeting. Also, note instances where your answers this time **were similar** to the most common response given by the class during the pre-test.

## II. Disaster Mythology.

A. **Myth:** Ask students: “What are some examples of myths you have heard about over the years?”

1. **Example:** mermaids (sea creatures with an upper body of a human female) (sculpture of a mermaid sits on the harbor in Copenhagen, Denmark).
2. **Example:** Volcano Goddess referred to as Pele.
3. **Example:** Hawaii myth. “Sometimes people tell of meeting Pele on the lonely roads near Kileuea. If the volcano remains quiet, people know that the Volcano Goddess is pleased with those she met. But if the earth trembles, they know that someone has roused her anger, and there will soon be another eruption.” (Thompson 1988, p. 19).
4. **Definition:** myths are beliefs or stories about creatures, ancient times or events that are **not based** on scientific research or findings.

## B. Disaster mythology.

1. **Definition:** a collection of beliefs about how people behave during disasters that have been **proven to be wrong** through scientific research.
2. **Example:** the **image** that the word disaster evokes for most people is one of panic flight.
3. There are many such **false images**.

### C. Research history.

1. National Opinion Research Center (NORC).
  - a. **Fritz** (1961) and associates documented alternative **images** of disaster response.
    - 1) Altruism, **not** anti-social behavior.
    - 2) Self-control, **not** mass panic.
  - b. **Quarantelli** (1960) pursued the concept of **disaster images** and documented them.
    - 1) Panic flight was **not evoked** by disaster warnings.
    - 2) Self-control, **not** panic behavior.
2. **Wenger** (1975, 1980) and associates conducted several studies.
  - a. **Community survey: minimal** disaster experience.
    - 1) One community.
    - 2) Random samples.
    - 3) N = 352.
    - 4) Instrument: “opinion survey”.
    - 5) Similar to Student Handout 7-1.
    - 6) **Results:** about **80% agreed** with these six questionnaire items (p. 49).
    - 7) Based on **scientific research**, the **correct** answer to all six items is “strongly disagree”.
  - b. **Community survey:** recent disaster experience.
    - 1) Three communities recently impacted by disasters.
    - 2) Random samples.
    - 3) N = 907.

- 4) Instrument: “opinion survey”.
- 5) Similar to Student Handout 7-1.
- 6) Results: about **70% agreed** with these six questionnaire items (p. 49).

c. **Organizational officials.**

- 1) Four communities.
- 2) Purposive sample (disaster responders).
- 3) N = 51.
- 4) Instrument: “opinion survey”.
- 5) Similar to Student Handout 7-1.

- d. **Results:** over **50% typically agreed** with these six questionnaire items (p. 67).

III. Class Results.

A. **Review** parallel results on Student Handout 7-2.

1. Item 1 – 83% of class agreed.
2. Item 2 – 83% of class agreed.
3. Note other items briefly.

B. **Conclusions:**

1. **“Correct” answer** for all items is “strongly disagree”.
2. “Correct” means, **scientific** research findings.
3. On “pre-test” class **resembled** general public.
4. Emergency officials have **more knowledge** and reflect a more correct **image** of disaster behavior.
5. **Too many** emergency officials still reflect belief in the disaster mythology.

### Supplemental Considerations:

The **key message** of this section is that research evidence supports the conclusion that the **public** generally **believes** in these **false images** of disaster behavior. By using the pre-test and post-test exercise, students can **discover** and **validate** for themselves the reality of the disaster mythology.

---

**Objective 7.2 Describe six myths about human response to disaster and relevant empirical research findings that have proven them to be incorrect.**

### Requirements:

Overhead 7-1; “Workshop Tasks.”

Overheads 7-2 through 7-7; “Opinion Survey: Item #1: Pre-Test Results” through “Opinion Survey: Item #7: Pre-Test Results”.

### Remarks:

I. Introduction.

A. **Remind** students of exercise procedures.

1. **Divide** class into three groups.
2. **Appoint** student roles for each group.
  - a. Chair.
  - b. Reporter.
  - c. Timer.
3. **Announce** time limit: 10 minutes.

B. **Display** Overhead 7-1; “Workshop Tasks”.

C. **Review** tasks.

1. **The questions:**

- a. How did your responses this time differ from those on the pre-test?

- b. What images did you have that evoked your responses this time as compared to the pre-test?
- c. What are the implications of the disaster mythology for emergency managers?

2. **Item assignments by group:**

- a. Group 1 – Items 1 and 2.
- b. Group 2 – Items 3 and 4.
- c. Group 3 – Items 5 and 6.

D. **Start** discussion.

E. **Stop** discussion.

II. Myth Number One: **panic**.

A. Group 1 Report (Questions 1 and 2 only) (2 minutes).

B. **Display** Overhead 7-2; “Opinion Survey: Item #1: Pre-Test Results”.

- 1. **Review** class responses.
- 2. **Describe** the process for **calculating** an average.
- 3. **Explain**: averages are used in making **comparative analyses**.

C. **Elaborate** as necessary with example like these.

- 1. **Example**: Three Mile Island incident – 1979.
  - a. No panic flight.
  - b. Official hesitation to warn because of fear of panic.
  - c. Source: Fischer 1998, p. 14.
- 2. **Example**: MGM Grand Fire, 1980 (Las Vegas, Nevada).
  - a. Many who died in rooms had soaked towels with water and placed them near doors.
  - b. Most evacuated via stairs, not elevators, in an orderly manner.

c. Source: Ruchelman 1988.

3. **Example:** Indianapolis, Indiana Coliseum explosion – 1963.

a. Patrons (7,839) watching a Holiday on Ice show followed instructions and exited.

b. No signs of panic.

c. A second explosion occurred during exiting, but no panic behavior ensued.

d. Source: Drabek 1968, pp. 146-149.

4. **Example:** Wenger et al. 1980 findings (p. 67).

a. Public survey: 18% disagreed.

b. Organizational officials: 49% disagreed.

III. Myth Number Two: **Looting.**

A. **Display** Overhead 7-3; “Opinion Survey: Item #2: Pre-Test Results”.

B. **Comment** on Group 1 report as relevant.

C. **Elaborate** as necessary with examples like these.

1. **Example:** Hurricane Gilbert – 1988.

a. City manager took “very public precautions”.

b. City manager feared public might not evacuate.

c. Source: Fischer 1998, p. 15.

2. **Example:** San Diego, California airplane crash – 1978.

a. Numerous reports of looting.

b. San Diego Chief of Police was concerned by rumors.

c. Police Chief contacted a national magazine: “There is absolutely no evidence that any looting occurred at the crash site or in the immediate vicinity.” Frazier 1979, p. 351).



d. Source: Frazier 1979, p. 351.

IV. Myth Number Three: Martial Law.

A. **Display** Overhead 7-4; “Opinion Survey: Item #3: Pre-Test Results”.

B. Group 2 report (2 minutes).

C. **Elaborate** as necessary with examples like these.

1. **Example:** Hurricane Andrew – 1992.

- a. National Guard units activated.
- b. Federal military units as resources.
- c. Public perception of Martial Law, but not declared.
- d. Source: Yelvington 1997, pp. 105-106.

2. **Example:** Dynes et al. 1972, review of literature.

- a. “. . . there has never been in the history of the United States the necessity to declare martial law in a disaster area.” (Dynes et al. 1972, p. 26).
  - b. “Press reports of ‘martial law’ in other disasters inevitability turn out to be completely false, or incorrect attributions regarding limited emergency power usually given by mayors or city councils to the local police. Typically the object of the executive order or city ordinance is to give the police more power to bar sightseers from disaster-stricken localities or to allow a pass system to be set up. In no way do such actions imply or involve any cessation to the regular civilian authority in the area.” (Dynes et al. 1972, p. 27).
3. **Clarify:** emphasize that **some looting** does take place following many disasters, but **widespread looting does not occur except** under highly specialized conditions.
- a. It is the **exaggerated image** that is the myth.
  - b. Looting behavior, and the **conditions that foster it**, will be discussed in-depth during Session No. 17 (“Understanding Looting Behavior”).

4. **Example:** Wenger et al. 1980 findings (p. 67).

- a. Public survey: 18% disagreed.
- b. Organizational officials: 24% disagreed.

V. Myth Number Four: Crime rates.

A. Display Overhead 7-5: “Opinion Survey: Item #4: Pre-Test Results”.

B. Comment on Group 2 report.

C. **Elaborate** as necessary with examples like these.

1. **Example:** Hurricane Betsy – 1965.

- a. Crime rate **dropped** 27 percent below the rate for the same month the year prior.
- b. Burglaries **dropped** 31 percent; thefts over \$50.00 **dropped** 13 percent.
- c. Source: Quarantelli and Dynes 1972, p. 69.

2. **Example:** Hurricane Betsy – 1965.

- a. Thefts under \$50.00 **dropped** 29 percent below the rate for the same month the year prior.
- b. Source: Quarantelli and Dynes 1972, p. 69.

3. **Example:** Wenger et al. 1980 findings (p. 67).

- a. Public survey: 26% disagreed.
- b. Organizational officials: 46% disagreed.

VI. Myth Number Five: Evacuation behavior.

A. **Display** Overhead 7-6: “Opinion Survey: Item #5: Pre-Test Results”.

B. Group 3 report (2 minutes).

C. **Elaborate** as necessary with examples like these.

1. **Example:** Ephrata, Pennsylvania – 1990.
  - a. Major fire, potential toxic cases.
  - b. Residents stayed home, hesitant to leave.
  - c. Desire to “ride it out.”
  - d. Source: Fischer 1998, p. 19.
2. **Example:** Port Jervis, New York.
  - a. False rumor of dam break.
  - b. Local newspaper reported “most” of 9,000 inhabitants had fled.
  - c. Field study documented only one-fourth (maximum) actually evacuated.
  - d. Source: Quarantelli 1960, p. 70.
3. **Example:** Wenger et al. 1980 findings (0. 67).
  - a. Public survey: 20% disagreed.
  - b. Organizational officials: 40% disagreed.

VII. Myths Number Six: Shock.

A. **Display** Overhead 7-7: “Opinion Survey: Item #6: Pre-Test Results”.

B. **Comment** on Group 3 report.

C. **Elaborate** as necessary with examples like these.

1. **Example:** unspecified location.
  - a. Victim behavior was reported by “friend of a friend.”
  - b. Victim remained at house, “. . . garden hose in hand, ready to wash the mud from the flood away, but was unable to move.”
  - c. Source: Fischer 1998, p. 16.
2. **Example:** Wichita Falls, Texas – 1979.

- a. Tornado causes 45 deaths and 950 serious injuries in community of 100,000.
  - b. 59% of total sample interviewed engaged in search and rescue activities immediately.
  - c. Projection from sample indicated that unofficial rescuers numbered 21,000.
  - d. Source: Drabek et al. 1981, pp. 95-97.
3. **Example:** Wenger et al. 1980 findings (p. 67).
- a. Public survey: 33% disagreed.
  - b. Organizational officials: 47% disagreed.

#### VIII. Other Myths.

##### A. **Price gouging.**

- 1. **Example:** Hurricane Gilbert – 1988.
- 2. **News broadcast:** merchants arrested for plywood sales price.
- 3. **Researchers:** contacted city police; no arrests.
- 4. Source: Fischer 1998, p. 15.

##### B. **Contagion** (fear spread like disease).

- 1. **Example:** group maintains morale.
- 2. Shipwreck near Australia.
- 3. 10 men in rubber raft for 10 days and on land three days prior to rescue.
- 4. **Roles shifted** among them, i.e., as despair was experienced, others took on role as consoler.
- 5. Source: Henderson and Bostock 1977, pp. 15-20.

##### C. **Psychological Dependency.**

- 1. **Example:** Mexico City earthquake – 1985.

2. Victims acted immediately.
3. Extensive search and rescue activities.
4. Source: Dynes et al. 1990.

#### **D. Shelter Use.**

1. **Example:** Worcester, Massachusetts.
2. Tornado left 10,000 persons homeless.
3. Public shelters housed only 50 individuals.
4. Relatives and friends: most people go there.
5. Source: Quarantelli 1960, p. 73.

#### **Supplemental Considerations:**

Through use of the workshop exercise and overheads that display class responses, this section can stimulate much student involvement. Some students will debate the evidence and point to examples of looting they have seen on television. These can be used to emphasize the **image of disaster** message. Looting does occur after some disasters, but the **exaggeration** of the activity is what creates the false image. Similarly, there are a few people that are overwhelmed by a disaster experience and thus reflect “disaster shock.” Overall, however, this response is the **atypical**, not common or frequent. So it is with each element of the disaster mythology. It is the **exaggerated image** that is the myth.

---

#### **Objective 7.3 Describe three implications of the disaster mythology for emergency managers.**

##### **Requirements:**

Overhead 7-8.

##### **Remarks:**

- I. Group Reports.
  - A. **Display** Overhead 7-1; “Workshop Tasks”.

- B. **Highlight** Question No. 3 – What are the implications of the Disaster Mythology for Emergency Managers?”
- C. Group reports (1 – 3) on Question No. 3 (1 minute each).
- II. Implications for Emergency Managers.
  - A. **Display** Overhead 7-8; “Implications for Emergency Managers”.
  - B. **Elaborate** on group reports as necessary to illustrate such points as these.
    - 1. **Public expectations** reflect disaster mythology.
    - 2. **Public behavior** is guided by the disaster mythology.
    - 3. **Demands on officials** are generated by public expectations based on the disaster mythology.
    - 4. **Official behavior** may reflect the disaster mythology.
    - 5. **The message:** professional emergency managers must use scientific knowledge **not** myth.

### Supplemental Considerations:

This is an introduction to the role of **scientific research** in the development of the rapidly developing **profession** of emergency management. In the **history** of social research on disasters, it was the **debunking** of exaggerated **images** of disaster behavior that precipitated important **policy shifts**. Many of these will be examined later in this course, but this session makes an important **first step**. Some students are likely to **question** some or all of the claims that the disaster mythology has been **debunked**. For example, they may refer to **people running** in the streets prior to and just after the collapse of the World Trade Towers. Such highly publicized scenes reinforce **images** of **panic** and rapid evacuation. Discussion of such doubts is crucial to insure **enhanced** student understanding. Fischer’s (1998) description of his **decisions** and **evacuation** during the TMI incident may be a helpful **point of reference** “This is normal, orderly behavior. It is not panic flight.” (p. 14).

---

### Course Developer References:

- I. Drabek, Thomas E. 1968. *Disaster In Aisle 13*. Columbus, Ohio: College of Administrative Science, Ohio State University.
- II. Drabek, Thomas E., Harriet L. Tamminga, Thomas S. Kilijanek, and Christopher R. Adams. 1981. *Managing Multiorganizational Emergency Responses*:

- Emergent Search and Rescue Networks in Natural Disasters and Remote Area Settings*. Boulder, Colorado: Institute of Behavioral Science, The University of Colorado.
- III. Dynes, Russell, E.L. Quarantelli and Gary A. Kreps. 1972. *A Perspective on Disaster Planning*. Columbus, Ohio: Disaster Research Center, Ohio State University.
  - IV. Dynes, Russell R., E.L. Quarantelli, and Dennis Wenger. 1990. *Individual and Organizational Response to the 1985 Earthquake in Mexico City, Mexico*. Newark, Delaware: Disaster Research Center, University of Delaware.
  - V. Fischer, Henry W., III. 1998. *Response to Disaster: Fact versus Fiction and It's Perpetuation*. Lanham, Maryland: University Press of America, Inc.
  - VI. Frazier, Kendrick. 1979. *The Violent Face of Nature*. New York: William Morrow and Company, Inc.
  - VII. Fritz, Charles E. 1961. "Disasters." Pp. 651-694 in *Contemporary Social Problems*, edited by Robert K. Merton and Robert A. Nisbet. New York: Harcourt.
  - VIII. Henderson, Scott and Tudor Bostock. 1977. "Coping Behavior after Shipwreck." *British Journal of Psychiatry* 131:15-20.
  - IX. Quarantelli, E.L. 1960. "Images of Withdrawal Behavior in Disasters: Some Basic Misconceptions." *Social Problems* 8:68-79.
  - X. Quarantelli, E.L. and Russell R. Dynes. 1972. "When Disaster Strikes (It Isn't Much Like What You've Heard and Read About)." *Psychology Today* 5:66-70.
  - XI. Ruchelman, Leonard. 1988. "The MGM Grand Hotel Fire." Pp. 101-114 in *Crisis Management: A Case Book*, edited by Michael T. Charles and John Choon K. Kim. Springfield, Illinois: Charles C. Thomas Publisher.
  - XII. Thompson, Vivian L. 1988 (original publication date: 1966). *Hawaiian Myths of Earth, Sea, and Sky*. Honolulu, Hawaii: University of Hawaii Press.
  - XIII. Wenger, Dennis E., James D. Dynes, Thomas D. Sebok, and Joan L. Neff. 1975. "It's a Matter of Myths: An Empirical Examination of Individual Insight into Disaster Response." *Mass Emergencies* 1:33-46.
  - XIV. Wenger, Dennis E., Thomas F. James, and Charles E. Faupel. 1980. *Disaster Beliefs and Emergency Planning*. Newark, Delaware: Disaster Research Project, University of Delaware.

- XV. Yelvington, Kevin A. 1997. "Coping In a Temporary Way." Pp. 92-115 in *Hurricane Andrew: Ethnicity, Gender, and the Sociology of Disasters* edited by Walter Gillis Peacock, Betty Hearn Morrow and Hugh Gladwin. London: Routledge.